

WHAT IS CLAIMED IS:

1. A sealable food container comprising:

- 5 (a) a base serving member having a generally planar base central portion, a base sidewall extending generally upwardly and outwardly therefrom and a base outer flange portion extending outwardly from said base sidewall;

10 said base sidewall defining a base sealing portion with (i) an undercut annular base sealing surface disposed between said substantially planar base central portion of said base serving member and said base outer flange portion, (ii) a base stop ridge adjacent an upper extremity of said undercut annular base sealing surface as well as (iii) a laterally extending retaining shelf adjacent a lower extremity of said undercut annular base sealing surface; and

- 15 (b) a sealing lid provided with a dome portion and a flexible lid sidewall extending downwardly from said dome portion as well as a lid flange portion extending outwardly with respect to said downwardly extending lid sidewall;

20 said lid flange portion including at its inner periphery a lid sealing portion with (i) an annular lid sealing surface extending upwardly with respect to said downwardly extending lid sidewall of said sealing lid and (ii) said lid sealing portion further defining a lid stop ridge;

25 wherein said base serving member and said sealing lid are configured such that when said sealing lid is forced downwardly on said base serving member said sealing lid is secured to said base serving member by cooperation of said

base stop ridge of said base serving member and said lid stop ridge of said sealing lid.

- 5 2. The food container according to Claim 1, wherein said laterally extending retaining shelf of said base serving member extends outwardly over a base sidewall shelf length of at least about 0.5% of the characteristic diameter of said base serving member.
- 10 3. The food container according to Claim 2, wherein said laterally extending retaining shelf of said base serving member extends outwardly over a base sidewall shelf length of at least about 1% of the characteristic diameter of said base serving member.
- 15 4. The food container according to Claim 3, wherein said laterally extending retaining shelf of said base serving member extends outwardly over a base sidewall shelf length of at least about 1.5% of the characteristic diameter of said base serving member.
- 20 5. The food container according to Claim 2, wherein said sealing lid is provided with a laterally extending lid shelf extending between the flexible sidewall of the sealing lid and the annular lid sealing surface of the lid, said lid shelf extending outwardly over a lid shelf radial span and being adapted to cooperate with the retaining shelf of the base serving member to position the sealing lid with respect thereto.
- 25 6. The food container according to Claim 3, wherein said sealing lid is provided with a laterally extending lid shelf extending between the flexible sidewall of the sealing lid and the annular lid sealing surface of the lid, said lid shelf extending outwardly over a lid shelf radial span and being adapted to cooperate with the

retaining shelf of the base serving member to position the sealing lid with respect thereto.

- 5 7. The food container according to Claim 4, wherein said sealing lid is provided with a laterally extending lid shelf extending between the flexible sidewall of the sealing lid and the annular lid sealing surface of the lid, said lid shelf extending outwardly over a lid shelf radial span and being adapted to cooperate with the retaining shelf of the base serving member to position the sealing lid with respect thereto.
- 10 8. The food container according to Claim 5, wherein the length of the lid shelf radial span is at least about 25% of the base sidewall shelf length.
- 15 9. The food container according to Claim 8, wherein the length of the lid shelf radial span is at least about 50% of the base sidewall shelf length.
- 20 10. The food container according to Claim 9, wherein the length of the lid shelf radial span is at least about 75% of the base sidewall shelf length.
- 25 11. The food container according to Claim 1, wherein said undercut annular base sealing surface of said base serving member is a frustal sealing surface extending upwardly and outwardly with respect to said substantially planar base central portion of said base serving member and said annular lid sealing surface of said lid is a frustal sealing surface extending upwardly and outwardly with respect to said downwardly extending lid sidewall of said sealing lid.
12. The food container according to Claim 11, wherein said lid stop ridge is located adjacent the upper edge of said annular lid sealing surface of said sealing lid and wherein said sealing lid is dimensioned so as to outwardly flexibly urge said

frustal sealing surface of said lid into surface-to-surface contact with said frustal sealing surface of said base serving member when said base serving member and said sealing lid are secured to one another.

- 5 13. The food container according to Claim 1, wherein said base outer flange of said base serving member is an arcuate outer flange.
- 10 14. The food container according to Claim 13, wherein said lid flange portion of said sealing lid is provided with an outer arcuate flange portion generally configured to overlay the arcuate outer flange of the base serving member.
- 15 15. The food container according to Claim 1, wherein said flexible lid sidewall of said sealing lid is a fluted sidewall.
- 20 16. The food container according to Claim 15, wherein said dome portion of said sealing lid has a generally planar dome upper surface portion and a downwardly extending lid sidewall provided with a plurality of outwardly convex flutes formed in said lid sidewall, said flutes having a characteristic cylindrical diameter, wherein said lid includes about 3 or fewer flutes per inch of engagement perimeter.
- 25 17. The food container according to Claim 16, wherein said outwardly convex flutes are circumferentially spaced apart from one another.
- 25 18. The food container according to Claim 17, wherein said outwardly convex flutes are spaced apart a circumferential distance of from about 0.05 inches to about 0.25 inches about the periphery of said sealing lid.

Express Mail Label No. EF318777425US

27

19. The sealable food container according to Claim 16, wherein said convex flutes of said lid project upwardly with respect to the generally planar dome upper surface portion of said dome and define a retaining ridge upper profile which is generally inwardly convex toward the center of the dome and wherein said base sidewall is provided with a mating annular sidewall recess at a lower portion of said base sidewall adapted to engage said generally convex retaining ridge profile of said sealing lid in order to render a plurality of said sealable food containers securely stackable with one another.
20. The sealable food container according to Claim 19, wherein said generally upwardly convex retaining ridge profile comprises a plurality of spaced arcuate flute profiles extending inwardly from the flexible sidewall of the sealing lid.
21. The food container according to Claim 16, wherein said sealing lid includes from about 1.5 to about 2.5 flutes per inch of engagement perimeter.
22. The food container according to Claim 21, wherein said sealing lid includes from about 2 to about 2.5 flutes per inch of engagement perimeter.
23. The food container according to Claim 16, wherein said flutes have a characteristic cylindrical diameter of from about 0.2 inches to about 0.80 inches.
24. The food container according to Claim 16, wherein the characteristic cylindrical diameter of said flutes is at least about 0.75% of the length of engagement perimeter.
25. The food container according to Claim 23, wherein the characteristic cylindrical diameter of said flutes is from about 1% to about 2.5% of the length of engagement perimeter.

Express Mail Label No. EF318777425US

28

26. The food container according to Claim 16, wherein an upper inward extension length of said flutes adjacent the generally planar upper surface portion of said dome is at least about 0.2 inches.
- 5 27. The food container according to Claim 26, wherein the upper inward extension length of said flutes adjacent the generally planar upper surface portion of said dome is at least about 0.3 inches
- 10 28. The food container according to Claim 19, wherein the upper inward extension length of said flutes above the generally planar upper surface portion of the dome is from about 1% to about 3% of the length of the engagement perimeter.
- 15 29. The food container according to Claim 19, wherein said flutes have a flute height above the generally planar dome upper surface portion of greater than about 0.07 inches.
- 20 30. The food container according to Claim 29, wherein said flutes have a flute height above the generally planar dome upper surface portion of from about 0.07 to about 0.15 inches.
31. The food container according to Claim 19, wherein said dome portion of said sealing lid is provided with a plurality of generally flat portions between said convex flutes having a span of from about 0.05 to about 0.2 inches.
- 25 32. The food container according to Claim 31, wherein said flat portions have a height above the generally planar upper surface portion of the dome of from about 0.01 inches to about 0.1 inches.

Express Mail Label No. EF318777425US

29

33. The food container according to Claim 15, wherein said sealing lid is provided with a laterally extending lid shelf extending between the flexible sidewall of the sealing lid and the annular lid sealing surface of the lid, said lid shelf extending outwardly over a radial span and being adapted to cooperate with the retaining shelf of the base serving member to position the sealing lid with respect thereto.
34. The food container according to Claim 19, wherein said sealing lid is provided with a laterally extending lid shelf extending between the flexible sidewall of the sealing lid and the annular lid sealing surface of the lid, said lid shelf extending outwardly over a radial span and being adapted to cooperate with the retaining shelf of the base serving member to position the sealing lid with respect thereto.
35. The food container according to Claim 34, wherein the laterally extending retaining shelf of the base serving member extends outwardly over a base sidewall shelf length of at least about 25 percent of the characteristic diameters of the convex flutes of the sealing lid.
36. The food container according to Claim 1, wherein said base serving member is formed from sheet thermoplastic material.
37. The food container according to Claim 36, wherein said base serving member is thermoformed, thermoformed by the application of vacuum or thermoformed by a combination of vacuum and pressure.
38. The food container of Claim 37, wherein said thermoplastic material comprises a foamed or solid polymeric material selected from the group consisting of: polyesters, polystyrenes, polypropylenes, polyethylenes, copolymers and mixtures thereof.

Express Mail Label No. EF31877425US

30

39. The food container according to Claim 38, wherein said base serving member is thermoformed from mineral-filled polypropylene sheet.

5 40. The food container according to Claim 39, wherein said base serving member has a wall thickness from about 10 to about 80 mils and consists essentially of from about 40 to about 90 percent by weight of a polypropylene polymer, from about 10 to about 60 percent by weight of a mineral filler, from about 1 to about 15 percent by weight polyethylene, up to about 5 weight percent titanium dioxide and optionally including a basic organic or inorganic compound comprising the
10 reaction product of an alkali metal or alkaline earth element with carbonates, phosphates, carboxylic acids as well as alkali metal and alkaline earth element oxides, hydroxides, or silicates and basic metal oxides, including mixtures of silicon dioxide with one or more of the following oxides: magnesium oxide, calcium oxide, barium oxide, and mixtures thereof.

15 41. The food container according to Claim 36, wherein said base serving member has a wall caliper of from about 10 to about 50 mils.

20 42. The food container according to Claim 41, wherein said base serving member has a wall caliper of from about 12 to about 25 mils.

43. The food container according to Claim 1, wherein said sealing lid is formed from sheet of thermoplastic material.

25 44. The food container according to Claim 43, wherein said sealing lid is thermoformed, thermoformed by the application of vacuum or thermoformed by a combination of vacuum and pressure.

45. The food container according to Claim 44, wherein said sealing lid is formed of a styrene polymer composition.
46. The food container according to Claim 45, wherein said styrene polymer
5 composition comprises a styrene-butadiene copolymer.
47. The food container according to Claim 45, wherein said sealing lid is formed of oriented polystyrene.
- 10 48. The food container according to Claim 44, wherein said sealing lid has a wall caliper of from about 2 to about 15 mils.
49. The food container according to Claim 45, wherein said sealing lid has a wall
15 caliper of from about 2 to about 15 mils.
50. The food container according to Claim 49, wherein said sealing lid has a wall caliper of from about 5 to about 13 mils.
51. The food container according to Claim 47, wherein said sealing lid has a wall
20 caliper of from about 2 to about 15 mils.
52. The food container according to Claim 51, wherein said sealing lid has a wall caliper of from about 5 to about 13 mils.
- 25 53. A sealable food container comprising:
- (a) a base serving member having a generally planar base central portion, a base sidewall extending generally upwardly and outwardly therefrom and a base outer flange portion extending outwardly from said base sidewall;

said base serving member including (i) a base sealing portion defined by said base sidewall outwardly and upwardly disposed with respect to said generally planar base central portion as well as (ii) a sidewall stacking recess at a lower portion of said base sidewall; and

(b) a sealing lid provided with a dome portion having a generally planar upper lid surface and a flexible lid sidewall extending downwardly from said dome portion;

said sealing lid defining (i) an annular lid sealing portion and (ii) being provided with a plurality of outwardly convex flutes in said flexible lid sidewall projecting inwardly at their upper portions to define an upper retaining ridge profile which is generally inwardly disposed toward the center of the dome with respect to said flexible lid sidewall;

wherein said base serving member and said sealing lid are configured such that when said sealing lid is forced downwardly on said base serving member said annular lid sealing portion of said sealing lid cooperates with the base sealing portion of said serving member to secure said sealing lid to said serving base member and wherein said sidewall stacking recess at the lower portion of the sidewall of said base serving member is adapted to engage said retaining ridge profile of said sealing lid to render a plurality of said sealable food containers securely stackable with one another.

54. The food container according to Claim 53, wherein said stacking recess has an arcuate profile.

55. The food container according to Claim 54, wherein said base sealing portion comprises (i) an undercut annular base sealing surface, (ii) a base stop ridge adjacent an upper extremity of said undercut annular base sealing surface as well as (iii) a laterally extending base retaining shelf adjacent a lower extremity of said undercut annular sealing surface.
56. The food container according to Claim 55, wherein said sealing lid is provided with a laterally extending lid shelf extending between the flexible lid sidewall of the sealing lid and the annular sealing portion of the lid, said lid shelf extending outwardly over a lid shelf radial span and being adapted to cooperate with the base retaining shelf of the base serving member to position the sealing lid with respect thereto.
57. The food container according to Claim 53, wherein said outer flange of said base serving member is an arcuate outer flange.
58. The food container according to Claim 57, wherein said sealing lid is provided with an outer arcuate flange portion generally configured to overlay the arcuate outer flange of the base serving member.
59. The food container according to Claim 53, wherein said lid includes about 3 or fewer flutes per inch of engagement perimeter.
60. The sealable food container according to Claim 53, wherein said generally inwardly and upwardly convex retaining ridge profile comprises a plurality of spaced arcuate flute profiles extending inwardly from the outer periphery of the container.

Express Mail Label No. EF318777425US

34

61. The food container according to Claim 53, wherein said outwardly convex flutes are circumferentially spaced apart from one another.
- 5 62. The food container according to Claim 61, wherein said outwardly convex flutes are spaced apart a distance of from about 0.05 to about 0.25" about the periphery of said sealing lid.
- 10 63. The food container according to Claim 53, wherein said flutes have a flute height above the generally planar upper surface portion of said dome of greater than about 0.07 inches.
- 15 64. The food container according to Claim 63, wherein said flutes have a flute height above the generally planar upper surface portion of said dome of from about 0.07 to about 0.15 inches.
- 20 65. The food container according to Claim 53, wherein said dome portion of said sealing lid is provided with a plurality of generally flat portions between said convex flutes having a span of from 0.05 to about 0.2 inches.
- 25 66. The food container according to Claim 65, wherein said flat portions have a height above the generally planar upper surface portion of the dome of from about 0.01 inches to about 0.1 inches.
67. The food container according to Claim 53, wherein said base serving member is formed from sheet thermoplastic material.
68. The food container according to Claim 53, wherein said base serving member is thermoformed, thermoformed by the application of vacuum or thermoformed by a combination of vacuum and pressure.

Express Mail Label No. EF318777425US

35

69. The thermoplastic container of Claim 68, wherein said thermoplastic material comprises a foamed or solid polymeric material selected from the group consisting of: polyesters, polystyrenes, polypropylenes, polyethylenes, copolymers and mixtures thereof.

5

70. The food container according to Claim 69, wherein said base serving member is thermoformed from mineral-filled polypropylene sheet.

71. The food container according to Claim 70, wherein said base serving member has a wall thickness from about 10 to about 80 mils and consists essentially of from about 40 to about 90 percent by weight of a polypropylene polymer, from about 10 to about 60 percent by weight of a mineral filler, from about 1 to about 15 percent by weight polyethylene, up to about 5 weight percent titanium dioxide and optionally including a basic organic or inorganic compound comprising the reaction product of an alkali metal or alkaline earth element with carbonates, phosphates, carboxylic acids as well as alkali metal and alkaline earth element oxides, hydroxides, or silicates and basic metal oxides, including mixtures of silicon dioxide with one or more of the following oxides: magnesium oxide, calcium oxide, barium oxide, and mixtures thereof.

10
15
20

72. The food container according to Claim 67, wherein said base serving member has a wall caliper of from about 10 to about 50 mils.

73. The food container according to Claim 72, wherein said base serving member has a wall caliper of from about 12 to about 25 mils.

25

74. The food container according to Claim 53, wherein said scaling lid is formed from a sheet of thermoplastic material.

75. The food container according to Claim 74, wherein said sealing lid is thermoformed, thermoformed by the application of vacuum or thermoformed by a combination of vacuum and pressure.
- 5 76. The food container according to Claim 75, wherein said sealing lid is formed of a styrene polymer composition.
77. The food container according to Claim 76, wherein said styrene polymer composition comprises a styrene-butadiene copolymer.
- 10 78. The food container according to Claim 76, wherein said sealing lid is formed of oriented polystyrene.
79. The food container according to Claim 75, wherein said sealing lid has a wall caliper of from about 2 to about 15 mils.
- 15 80. The food container according to Claim 76, wherein said sealing lid has a wall caliper of from about 2 to about 15 mils.
81. The food container according to Claim 80, wherein said sealing lid has a wall caliper of from about 5 to about 13 mils.
- 20 82. The food container according to Claim 78, wherein said sealing lid has a wall caliper of from about 2 to about 15 mils.
- 25 83. The food container according to Claim 82, wherein said sealing lid has a wall caliper of from about 5 to about 13 mils.